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EXAMINER

HAROON, ADEEL

ART UNIT	PAPER NUMBER
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2618

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/780,008	Applicant(s) ELLIOTT, BRIG BARNUM	
	Examiner Adeel Haroon	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1, 4-6, 8, 11, 12, 16-19, 21-23, 25, 27-29, and 33- 38 are rejected under 35 U.S.C. 102(a) as being anticipated by Menon et al. (U.S. H2079).

With respect to claim 1, Menon et al. disclose a patch panel system, element number 12, in figure 2. Menon et al. disclose an interface system, element numbers 58, 60, and 62, that include a plurality of ports connected to a plurality of user devices, element numbers 52, 54, and 56 (Column 6, lines 36-52). Menon et al. teach receiving an analog signal from a user device, generating a packet from the analog signal, and transmitting the packet to a radio unit, element number 64 (Column 8, line 52 – Column 9, line 6). The radio unit of Menon et al. receives the packet and transmits the signal wirelessly over a radio channel (Column 7, lines 39-41); therefore, the radio unit must also inherently convert the packet to a radio signal.

With respect to claim 4, Menon et al. disclose a plurality of different types of user devices (Column 6, lines 36-37).

With respect to claim 5, Menon et al. teach digitizing the analog signal thus obtaining bit representation corresponding to the analog signal (Column 6, lines 41-48) Menon et al. disclose using this bit representation as the payload portion of the packet (Column 6, lines 54-59). Menon et al. further disclose adding header information to the packet that identifies the radio channel/destination (Column 7, lines 13-18).

With respect to claim 6, Menon et al. further disclose using Internet protocol header information for the packet (Column 4, lines 11-16).

With respect to claim 8, Menon et al. disclose frequency modulated waveform (Column 6, lines 44-48).

With respect to claim 9, Menon et al. teach receiving the packet and transmitting the signal wirelessly over a radio channel (Column 7, lines 39-41); therefore, the radio unit must also inherently convert the packet to depacketized information and then to a radio signal.

With respect to claims 11 and 12, Menon et al. disclose binding between the port and radio channel, which is controllable by management unit, element number 62, (Column 7, lines 4-21).

With respect to claim 16, Menon et al. disclose receiving, recognizing, and including signaling information with the packet (Column 6, line 53 – Column 7, line 2).

With respect to claims 17 and 18, Menon et al. disclose a patch panel system and method for using the patch panel system with a plurality of ports and a plurality of

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radio channels in figure 2 (Column 7, lines 39-41 and Column 9, lines 13-18). Menon et al. disclose a binding between ports and radio channels using addresses associated with the ports and radio channels (Column 7, lines 3-21). Menon et al. teach receiving an analog signal from a user device, generating a packet from the analog signal, and transmitting the packet to a radio unit, element number 64 (Column 8, line 52 – Column 9, line 6). The radio unit of Menon et al. receives the packet and transmits the signal wirelessly over a radio channel (Column 7, lines 39-41); therefore, the radio unit must also inherently convert the packet to a radio signal.

With respect to claim 19, Menon et al. disclose a patch panel system in figure 2. Menon et al. disclose a radio unit, element number 64, that receives a radio signal, generates a packet from the radio signal, and transmits the packet (Column 9, lines 7-12). Menon et al. further disclose an interface unit connected to a plurality of user devices that receive the packet, convert the packet to an analog signal, and output the analog signal to a user device (Column 9, lines 13-21).

With respect to claim 21, Menon et al. disclose a plurality of different types of user devices (Column 6, lines 36-37).

With respect to claim 22, Menon et al. teach digitizing the analog signal thus obtaining bit representation corresponding to the analog signal (Column 6, lines 41-48) Menon et al. disclose using this bit representation as the payload portion of the packet (Column 6, lines 54-59). Menon et al. further disclose adding header information to the packet that identifies the radio channel/destination (Column 7, lines 13-18).

With respect to claim 23, Menon et al. further disclose using Internet protocol header information for the packet (Column 4, lines 11-16).

With respect to claim 25, Menon et al. disclose frequency modulated waveform (Column 6, lines 44-48).

With respect to claim 27, Menon et al. disclose converting the packet to an analog signal by converting depacketized information to an analog signal (Column 9, lines 16-22).

With respect to claims 28 and 29, Menon et al. disclose binding between the port and radio channel, which is controllable by management unit, element number 62, (Column 7, lines 4-21).

With respect to claim 33, Menon et al. disclose receiving, recognizing, and including signaling information with the packet (Column 6, line 53 – Column 7, line 2).

With respect to claims 34 and 35, Menon et al. disclose a patch panel system and method for using the patch panel system with a plurality of ports and a plurality of radio channels in figure 2 (Column 7, lines 39-41 and Column 9, lines 13-18). Menon et al. disclose a binding between ports and radio channels using addresses associated with the ports and radio channels (Column 7, lines 3-21). Menon et al. disclose a radio unit, element number 64, that receives a radio signal, generates a packet from the radio signal, and transmits the packet (Column 9, lines 7-12). Menon et al. further disclose an interface unit convert the packet to an analog signal and output the analog signal via the port (Column 9, lines 13-21).

With respect to claim 36, Menon et al. disclose a patch panel system, element number 12, in figure 2. Menon et al. disclose a first interface system, element numbers 58, 60, and 62, that include a plurality of ports connected to a plurality of user devices, element numbers 52, 54, and 56 (Column 6, lines 36-52). Menon et al. teach receiving an analog signal from a user device, generating a packet from the analog signal, and transmitting the packet to a radio unit, element number 64 (Column 8, line 52 – Column 9, line 6). The radio unit of Menon et al. receives the packet and transmits the signal wirelessly over a radio channel (Column 7, lines 39-41); therefore, the radio unit must also inherently convert the packet to a radio signal. Menon et al. disclose a second radio unit, element number 64, that receives a radio signal, generates a packet from the radio signal, and transmits the packet (Column 9, lines 7-12). Menon et al. further disclose a second interface unit convert the packet to an analog signal and output the analog signal via the port (Column 9, lines 13-21).

With respect to claims 37 and 38, Menon et al. disclose the first and second interface units and radio units include a same interface unit and radio unit respectively in figure 2.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Menon et al. (U.S. H2079) in view of Hunter et al. (U.S. 4,751,697).

With respect to claim 2, the patch panel system of Menon et al. is described above in the discussion of claim 1. Menon et al. do not disclose the signal being associated with a constant bit rate service. However, Hunter et al. disclose a distributed packet switching system teaching signals being associated with a constant bit rate service (Column 6, lines 51-67). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to include Hunter et al.'s constant bit rate servicing technique to the system of Menon et al. in order to ensure a stable quality of communication.

5. Claims 3, 13-15, 20, 30-32, 43, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Menon et al. (U.S. H2079) in view of Coombes et al. (U.S. 6,650,908).

With respect to claim 3, the patch panel system of Menon et al. is described above in the discussion of claim 1. Menon et al. further disclose a plurality of interface units, element numbers 58 and 62, connected to a plurality of user devices (Column 7, lines 3-7). Menon et al. teach transmitting the signals over a plurality of radio channels

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(Column 7, lines 39-42), but do not expressly disclose a plurality of radio units to perform this operation. However, Coombes et al. disclose a communication system providing packet signals to a plurality of radio units, element number 112, that communicate over a plurality of types of radio channels (Column 2, lines 52-58). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to apply Coombes et al. plurality of radio units into the system of Menon et al. in order to provide a structure for multiple channel communication especially because of the suggestion of Menon et al.

With respect to claims 13 and 14, the patch panel system of Menon et al. is described above in the discussion of claim 1. Menon et al. also disclose binding between the port and radio channel, which is controllable by management unit, element number 62, (Column 7, lines 4-21). Menon et al. teach transmitting the signals over a plurality of radio channels (Column 7, lines 39-42), but do not expressly disclose a plurality of radio units to perform this operation. However, Coombes et al. disclose a communication system providing packet signals to a plurality of radio units, element number 112, that communicate over a plurality of types of radio channels (Column 2, lines 52-58). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to apply Coombes et al. plurality of radio units into the system of Menon et al. in order to provide a structure for multiple channel communication especially because of the suggestion of Menon et al.

With respect to claim 15, Menon et al. further disclose using a first address associated with the ports (Column 9, lines 13-18). Menon et al. teach using a second

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address associated with radio channels/destination that used to transmit the packet from the interface unit to the radio unit (Column 7, lines 13-18).

With respect to claim 20, the patch panel system of Menon et al. is described above in the discussion of claim 19. Menon et al. further disclose a plurality of interface units, element numbers 58 and 62, connected to a plurality of user devices (Column 7, lines 3-7). Menon et al. teach transmitting the signals over a plurality of radio channels (Column 7, lines 39-42), but do not expressly disclose a plurality of radio units to perform this operation. However, Coombes et al. disclose a communication system providing packet signals to a plurality of radio units, element number 112, that communicate over a plurality of types of radio channels (Column 2, lines 52-58). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to apply Coombes et al. plurality of radio units into the system of Menon et al. in order to provide a structure for multiple channel communication especially because of the suggestion of Menon et al.

With respect to claims 30 and 31, the patch panel system of Menon et al. is described above in the discussion of claim 19. Menon et al. also disclose binding between the port and radio channel, which is controllable by management unit, element number 62, (Column 7, lines 4-21). Menon et al. teach transmitting the signals over a plurality of radio channels (Column 7, lines 39-42), but do not expressly disclose a plurality of radio units to perform this operation. However, Coombes et al. disclose a communication system providing packet signals to a plurality of radio units, element number 112, that communicate over a plurality of types of radio channels (Column 2,

lines 52-58). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to apply Coombes et al. plurality of radio units into the system of Menon et al. in order to provide a structure for multiple channel communication especially because of the suggestion of Menon et al.

With respect to claim 32, Menon et al. further disclose using a first address associated with the ports (Column 9, lines 13-18). Menon et al. teach using a second address associated with radio channels/destination that used to transmit the packet from the interface unit to the radio unit (Column 7, lines 13-18).

With respect to claim 43, Menon et al. disclose patch panel system in figure 2. Menon et al. disclose a plurality interface systems, element numbers 58, 60, and 62, that include a plurality of ports connected to a plurality of user devices, element numbers 52, 54, and 56 (Column 6, lines 36-52). Menon et al. teach using a first address associated with radio channels/destination (Column 7, lines 13-18). Menon et al. further disclose using a second address associated with the ports that that create binding between the port and radio channel (Column 9, lines 13-21). Menon et al. teach transmitting the signals over a plurality of radio channels (Column 7, lines 39-42), but do not expressly disclose a plurality of radio units to perform this operation. However, Coombes et al. disclose a communication system providing packet signals to a plurality of radio units, element number 112, that communicate over a plurality of types of radio channels (Column 2, lines 52-58). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to apply Coombes et al. plurality of

radio units into the system of Menon et al. in order to provide a structure for multiple channel communication especially because of the suggestion of Menon et al.

With respect to claim 44, Menon et al. disclose patch panel system in figure 2. Menon et al. disclose a plurality interface systems, element numbers 58, 60, and 62, that include a plurality of ports connected to a plurality of user devices, element numbers 52, 54, and 56 (Column 6, lines 36-52). Menon et al. teach using a first address associated with radio channels/destination (Column 7, lines 13-18). Menon et al. further disclose using a second address associated with the ports that are used to transmit packets between the port and the radio channel (Column 9, lines 13-21). Menon et al. teach transmitting the signals over a plurality of radio channels (Column 7, lines 39-42), but do not expressly disclose a plurality of radio units to perform this operation. However, Coombes et al. disclose a communication system providing packet signals to a plurality of radio units, element number 112, that communicate over a plurality of types of radio channels (Column 2, lines 52-58). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to apply Coombes et al. plurality of radio units into the system of Menon et al. in order to provide a structure for multiple channel communication especially because of the suggestion of Menon et al.

6. Claims 7 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Menon et al. (U.S. H2079).

With respect to claim 7, the patch panel system of Menon et al. is described above in the discussion of claims 1 and 5. Menon et al. further disclose the capability of using different protocols in the system (Column 4, lines 52-54) but do not expressly disclose Ethernet protocol. However, the examiner takes official notice that Ethernet protocol is well known in the art and that it would be obvious to one of ordinary skill in the art to use Ethernet protocol in the system of Menon et al. in order to be compatible with Ethernet type systems.

With respect to claim 24, the patch panel system of Menon et al. is described above in the discussion of claims 19 and 22. Menon et al. further disclose the capability of using different protocols in the system (Column 4, lines 52-54) but do not expressly disclose Ethernet protocol. However, the examiner takes official notice that Ethernet protocol is well known in the art and that it would be obvious to one of ordinary skill in the art to use Ethernet protocol in the system of Menon et al. in order to be compatible with Ethernet type systems.

7. Claims 10 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Menon et al. (U.S. H2079) in view of Wilson (U.S. 5,185,796).

With respect to claim 10, the patch panel system of Menon et al. is described above in the discussion of claim 1. Menon et al. do not disclose encrypting the bits. However, Wilson discloses packet communication system that encrypts the bits associated with a packet (Column 2, lines 20-44). Therefore, it would be obvious to one

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of ordinary skill in the art at the time of the applicant's invention to encrypt the bits as taught by Wilson in the system Menon et al. in order to provide security for the information.

With respect to claim 26, the patch panel system of Menon et al. is described above in the discussion of claim 19. Menon et al. do not disclose decrypting the bits. However, Wilson discloses packet communication system that decrypts the bits associated with a packet (Column 2, lines 20-44). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to encrypt the bits as taught by Wilson in the system Menon et al. in order to provide security for the information.

8. Claims 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Menon et al. (U.S. H2079) in view of Coombes et al. (U.S. 6,650,908) further in view of Hunter et al. (U.S. 4,751,697).

With respect to claim 39, Menon et al. disclose patch panel system in figure 2. Menon et al. disclose a plurality interface systems, element numbers 58, 60, and 62, that include a plurality of ports connected to a plurality of user devices, element numbers 52, 54, and 56 (Column 6, lines 36-52).

Menon et al. teach transmitting the signals over a plurality of radio channels (Column 7, lines 39-42), but do not expressly disclose a plurality of radio units to perform this operation. However, Coombes et al. disclose a communication system

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providing packet signals to a plurality of radio units, element number 112, that communicate over a plurality of types of radio channels (Column 2, lines 52-58).

Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to apply Coombes et al. plurality of radio units into the system of Menon et al. in order to provide a structure for multiple channel communication especially because of the suggestion of Menon et al.

Menon et al. teach the combination of the interface unit and radio unit provides conversion to packetized communication and reconversion of packetized communication (Column 8, line 52 – Column 9, line 6 and Column 9, lines 13-21). Menon et al. do not disclose the signal being associated with a constant bit rate service. However, Hunter et al. disclose a distributed packet switching system teaching signals being associated with a constant bit rate service (Column 6, lines 51-67). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to include Hunter et al.'s constant bit rate servicing technique to the system of Menon et al. in order to ensure a stable quality of communication.

With respect to claims 40 and 41, Menon et al. disclose binding between the port and radio channel, which is controllable by management unit, element number 62, (Column 7, lines 4-21).

With respect to claim 42, Menon et al. further disclose using a first address associated with the ports (Column 9, lines 13-18). Menon et al. teach using a second address associated with radio channels/destination that used to transmit the packet from the interface unit to the radio unit (Column 7, lines 13-18).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Comroe et al. (U.S. 4,926,495) disclose a dispatch system that uses packet signals for a plurality of user devices and radio units.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adeel Haroon whose telephone number is (571) 272-7405. The examiner can normally be reached on Monday thru Friday, 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Nguyen Vo
5-26-2006

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